



Ryobi P202 Motor Replacement

Replacement of the Ryobi P202 Motor.

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INTRODUCTION

This guide details the process of removing the motor assembly from the drill. The process requires removing all of the internal electronics from the drill case. Due to the tight constraints of the wiring within the drill, reassembling the drill may require use of a spudger to push the wires out of the way of the case.




TOOLS:

- [T10 Torx Screwdriver](#) (1)
 - [Soldering Station](#) (1)
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Step 1 — Battery



 The battery can shock you. Only touch plastic, non-conductive components.

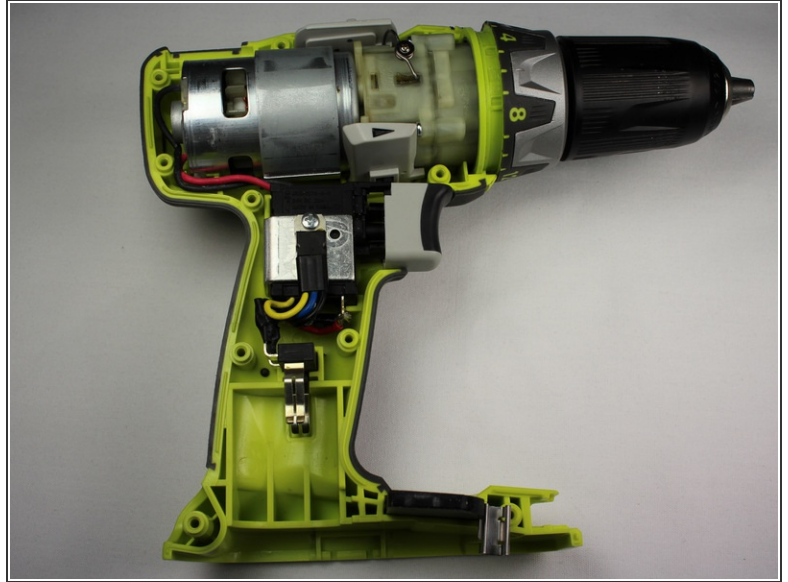
- Detach the battery unit from the drill body by pressing the battery release buttons on both sides of the unit and pulling outwards.


Step 2 — Right Side Case



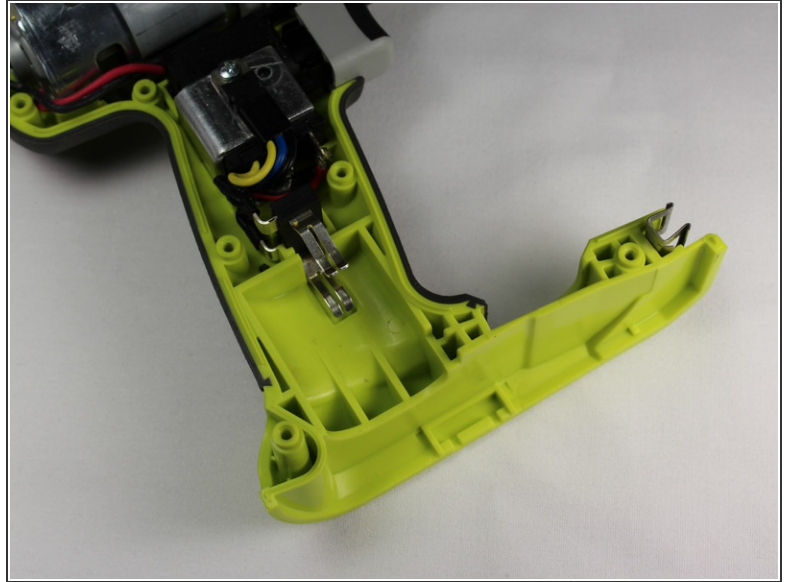
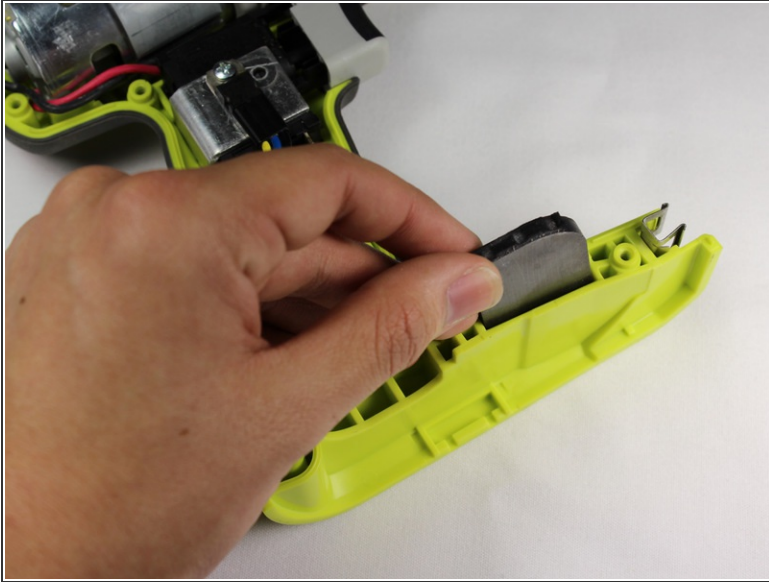
- Use a Torx T10 screw driver to unscrew all ten 13.5 mm screws from the drill casing to gain access to the interior.

Step 3



- Gently lift the casing from the drill body.
 - Take the casing completely off the drill body to gain access to the interior of the drill.
-  The Ryobi P202 casing has Part #: 200690001

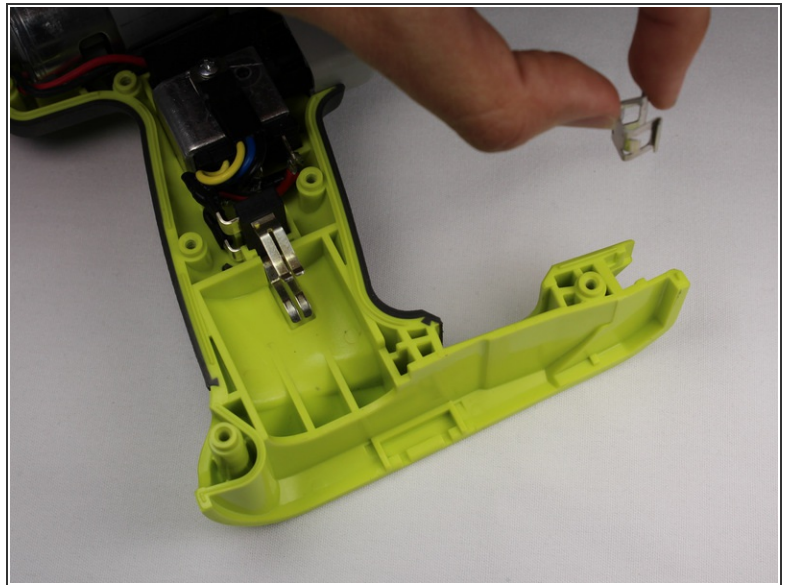
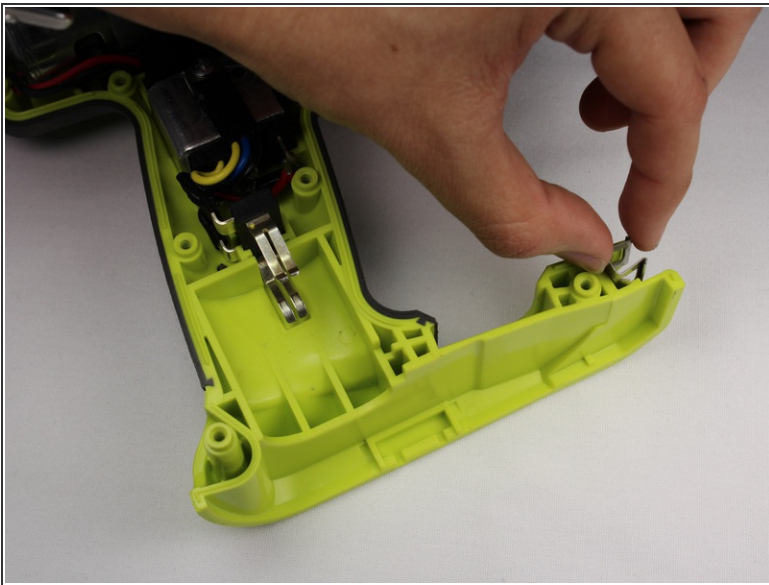
Step 4 — Magnetic Tray



- Gently lift the magnetic tray from the bottom of the drill body.

i The magnet is Part #: 303001015

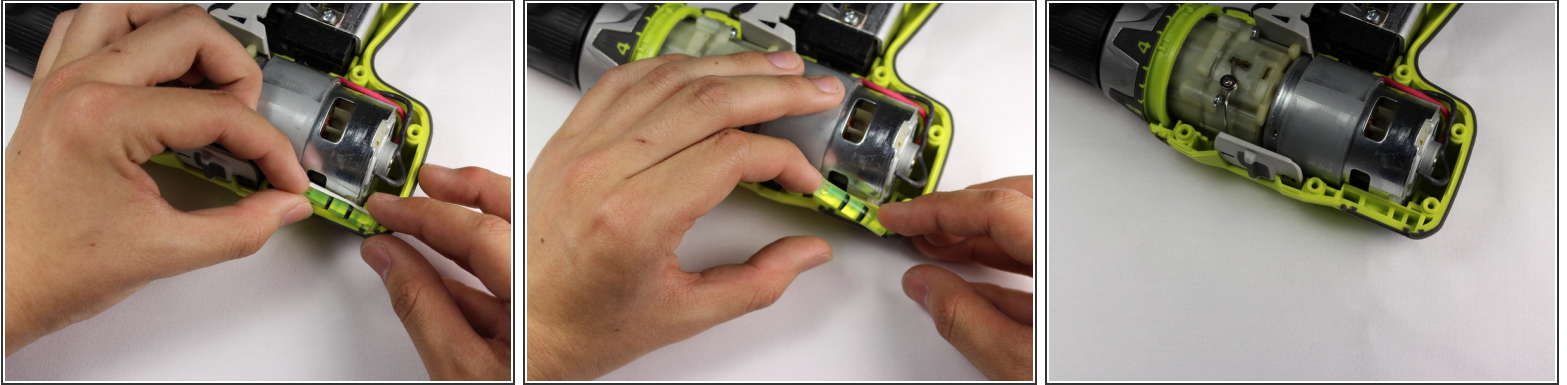
Step 5 — Bit Storage Clip




- Grip the bit-clip and gently lift up to remove it from the case.

i The bit-clip is Part #: 630206007

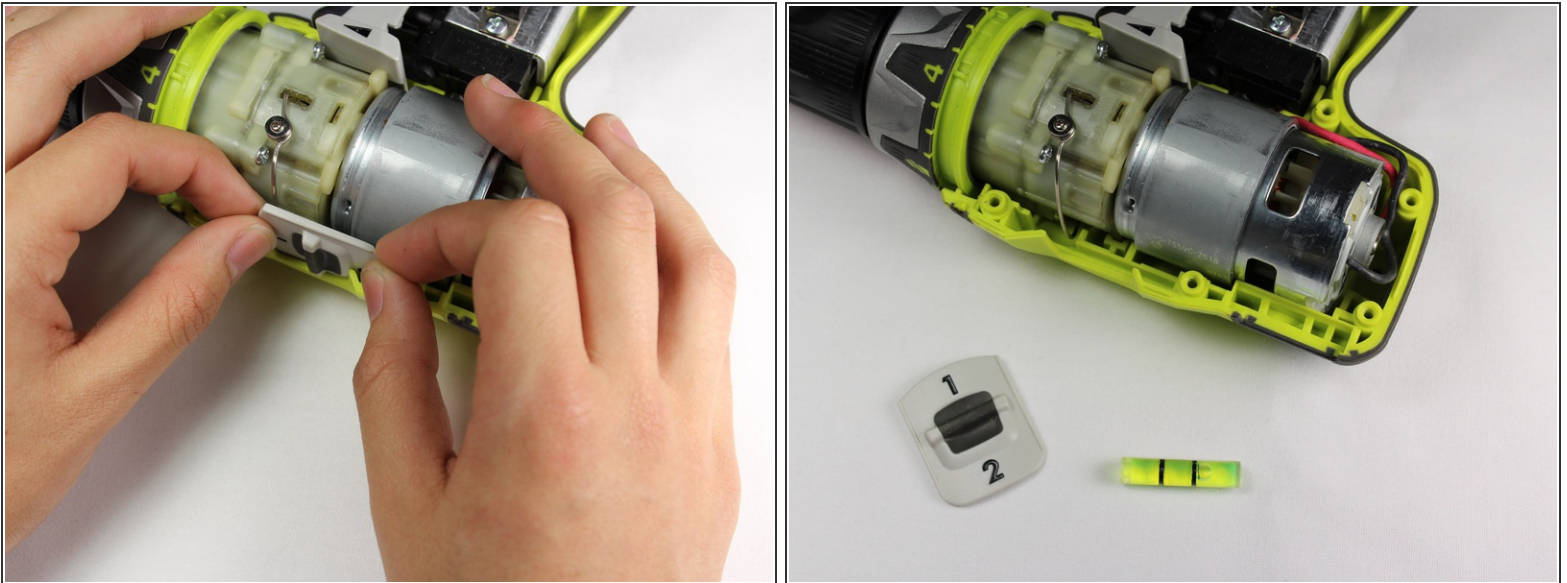
Step 6 — Level Gauge




- Rotate the Drill 180 degrees so that the top is facing you.
- Lift the level gauge out from the top corner of the drill.

 The level gauge is Part #: 3000909

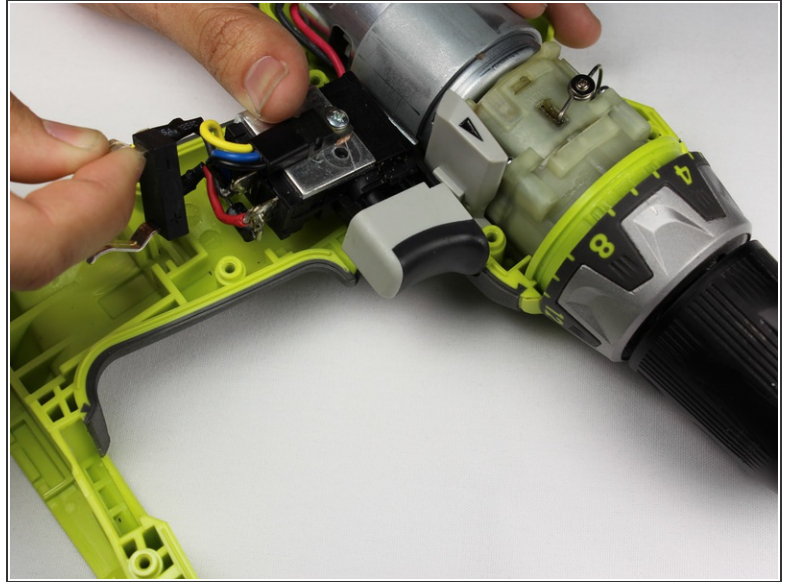
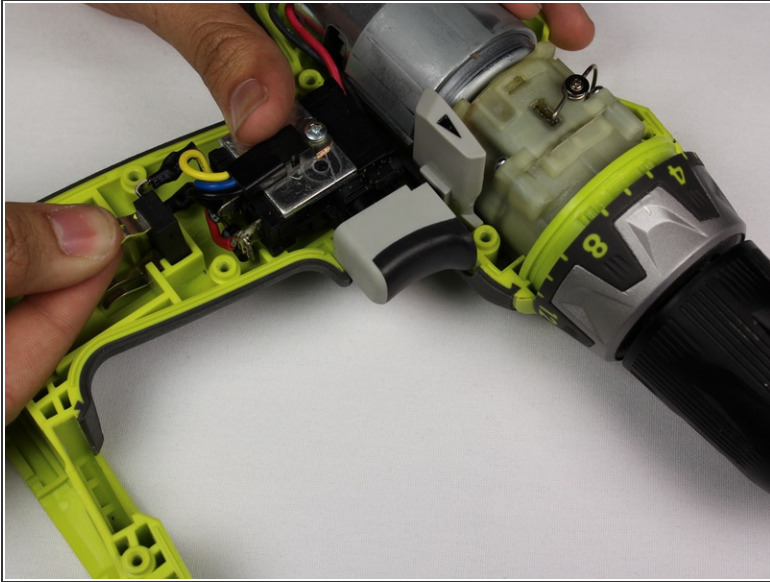
Step 7 — Gear Select Switch



- Lift the gear switch upwards from the top of the drill head.

 The gear switch is Part #: 341098001

Step 8 — Battery Contacts



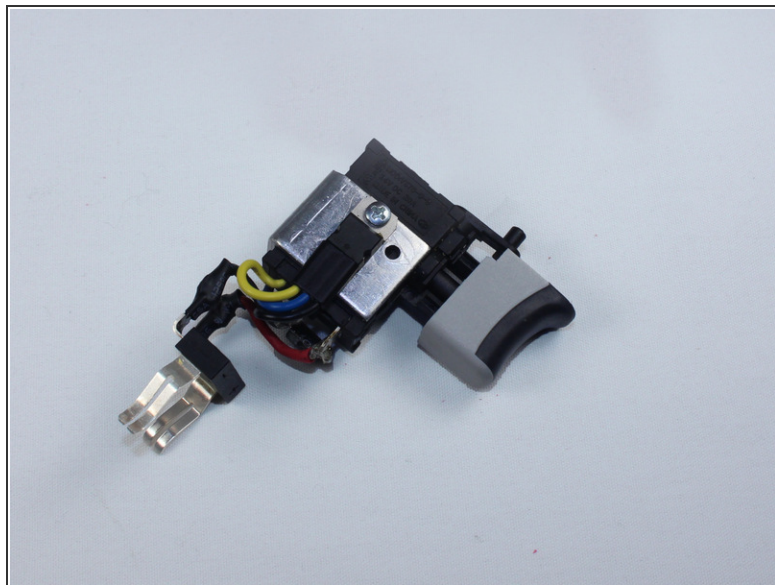
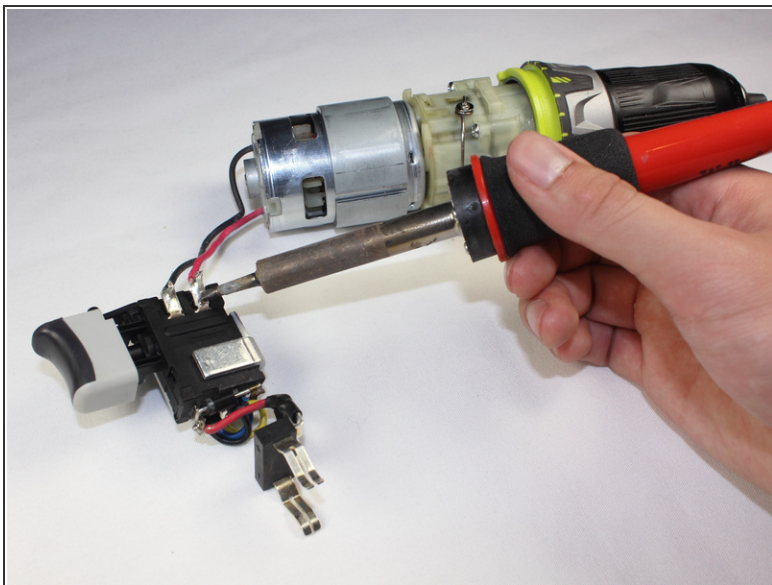
- Grip the battery clip and pull straight up to remove the metal battery contacts.
- You can now clean the metal battery contacts with isopropyl alcohol.

Step 9 — Trigger Assembly



- Holding the direction select switch in place, grip both sides of the trigger assembly and lift it up and towards the base of the drill.

Step 10

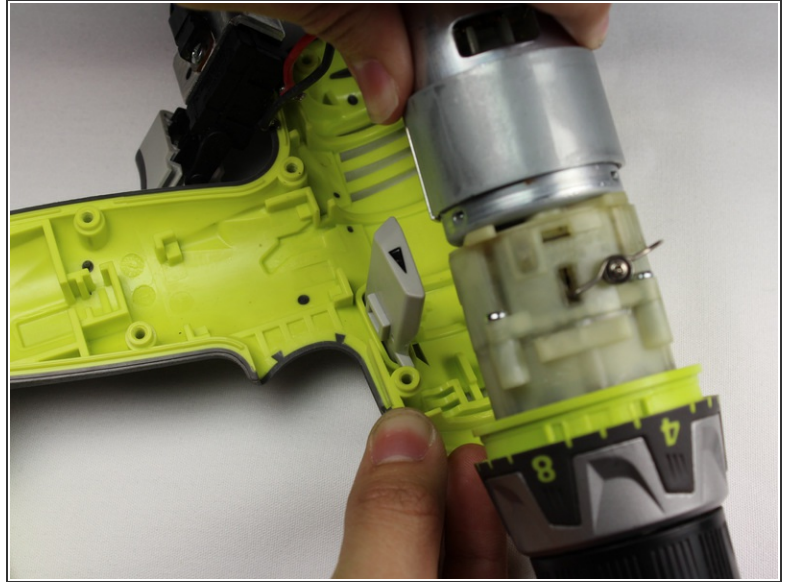
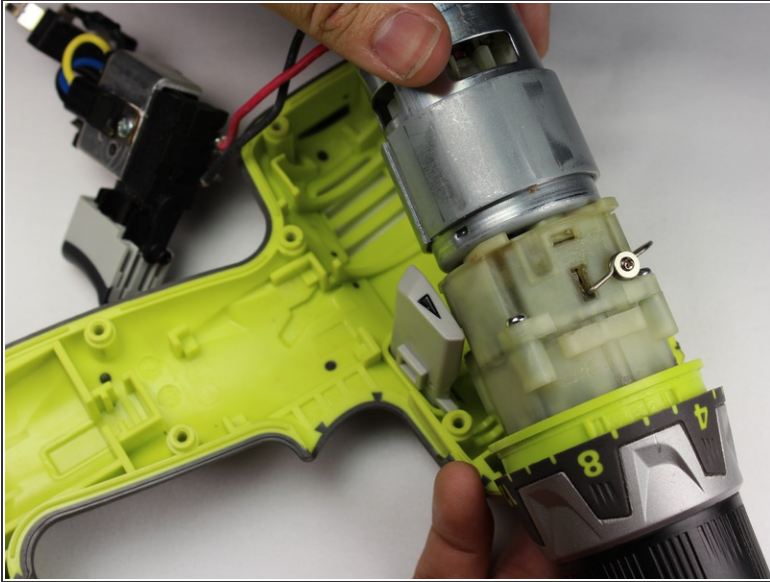


- To separate the trigger assembly from the motor, use a soldering iron to melt the solder and pull gently on the red and black wires from the trigger.

 Heating the solder may melt the plastic packaging. Prior experience with soldering is required.

 The trigger assembly is Part #: 270001392

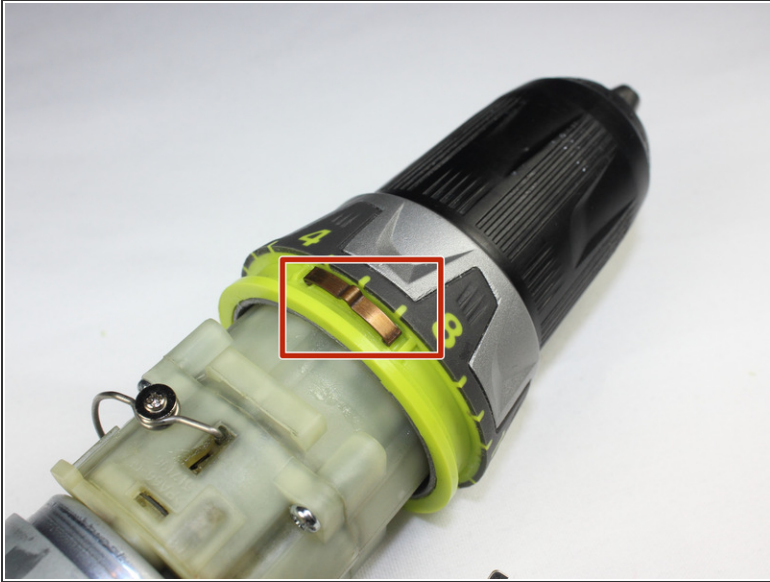
Step 11 — Motor



- Gripping the rear of the motor and the chuck, lift up.

ⓘ There are two copper springs that are attached to the front of the chuck. They may fall off when lifting the chuck, so be careful when doing so.

Step 12



- Remove the copper springs. There are two on the either sides of the chuck and are loosely placed in the chuck's grooves.
- ⓘ These springs are small and may fall off when you lift the motor up. Take note of the springs when doing so.

Step 13



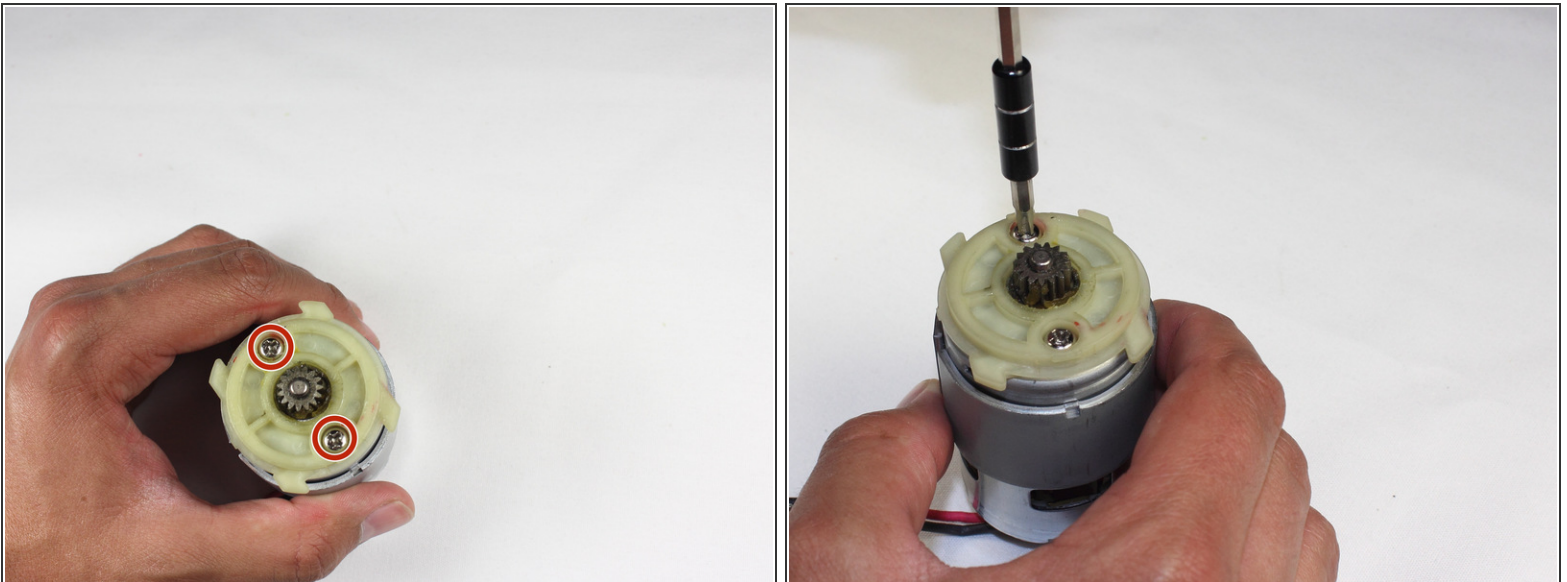
- Lift up on the direction toggle to remove it from the case.

Step 14



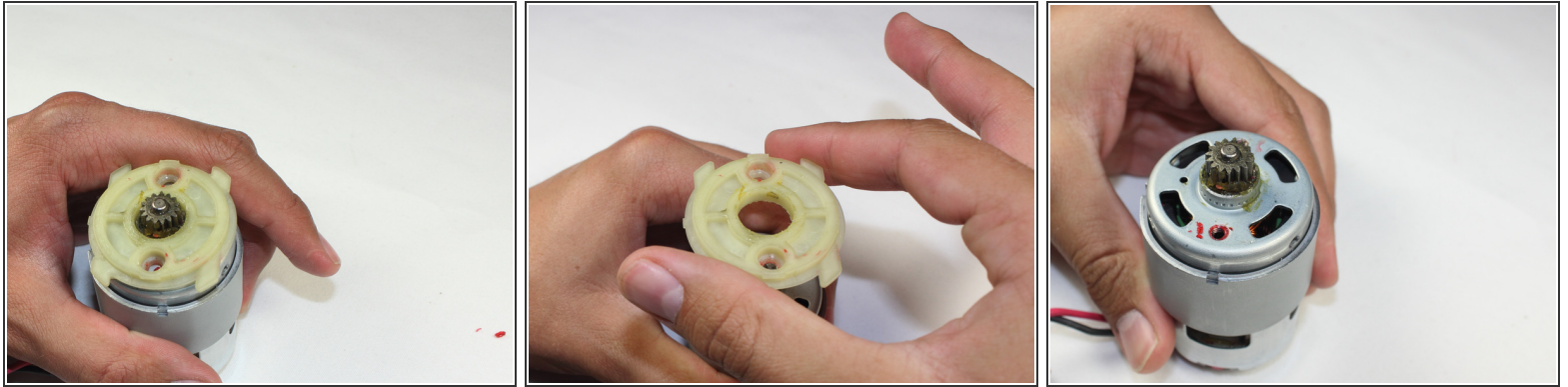
- Hold the chuck and twist the motor clockwise and then pull apart to separate the motor from the chuck.
- ⓘ The chuck has a loose black washer that holds five gears in place. Be careful not to separate the washer.
- ⓘ When reassembling the chuck and motor, take note that the red wire in the back of the motor is farthest from the top of the assembly. In other words, the red wire should be closest to the trigger.

Step 15



- Unscrew the two 10mm Philips #1 screws to remove the plastic spacer. Be careful not to lose the metal ring washers that come with the screws.

Step 16



- Remove the plastic spacer by lifting it straight up.

To reassemble your device, follow these instructions in reverse order.

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